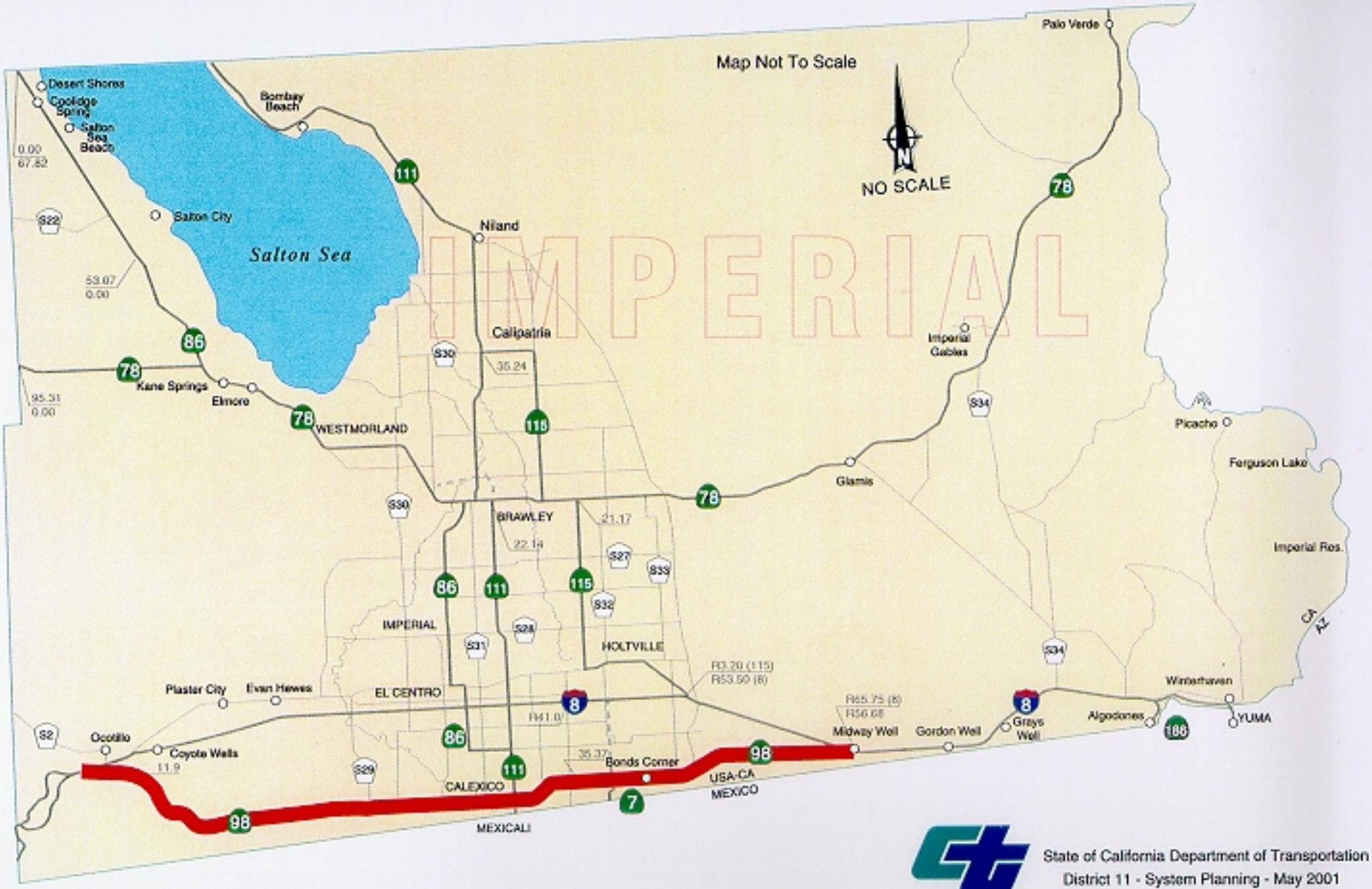
DISTRICT 11

STATE ROUTE 98 TRANSPORTATION CONCEPT REPORT



State of California Department of Transportation
District 11 - System Planning - May 2001
1450 Frazee Road, - San Diego, CA. 92108

TABLE OF CONTENTS

LIST OF TABLES

TRANSPORTATION CONCEPT REPORT SUMMARY
State Route 98
11- IMP – 98 P.M. R 0.3 – R 56.9

The Transportation Concept Report (TCR) is a planning document which describes the Department's basic approach to the development of a given highway corridor. Considering financial constraints and projected travel demand, this TCR establishes a 20 year transportation planning concept for State Route 98 (SR-98) and identifies modal transportation options needed to achieve the concept. The concept includes operating levels of service (LOS), modal improvements, and new technologies. The TCR also considers potential long term needs for the corridor beyond the 20 year planning period. The long term needs focus on the Post-2020 Ultimate Transportation Corridor (UTC).

The TCR is a preliminary planning document that leads to subsequent programming and the project development process. Specific proposed nature of improvements (i.e., number of lanes, access control, etc.) may change in later project development stages, with final determinations made during the project study report (PSR), project report (PR) or design phases.

Each TCR must be viewed as an integral part of a planned system. The TCR is based on the completion of the 20 year system. The system has been developed to meet anticipated travel demand generated from regional growth forecasts. Removal of any portion of a route from the system could adversely affect travel on parallel or intersecting routes.

The TCR is prepared by Caltrans District 11 staff in cooperation with local and regional agencies. The TCR is updated as necessary as conditions change or new information is obtained.

The focus of the TCR is the 2020 Transportation Concept, which includes State highway, transit, system management and travel reduction, goods movement, international border, aviation and nonmotorized components.

ROUTE DESCRIPTION

State Route 98 (SR-98) is a mostly two lane conventional highway, traversing the southern portion of Imperial Valley. The 56.9 mile route follows an east-west alignment through Imperial County parallel to Interstate 8 (I-8) and the U.S.A./Mexico International Border. SR-98 begins at I-8 near Ocotillo at Postmile (P.M). Imperial (IMP.) 0.3, intersects SR-111 (P.M. 32.3) and SR-7 (P.M. 39.6) and terminates at I-8 near Midway Well (P.M. 56.9).

SR-98 was originally added to the State Highway System as Route 202 in 1933, at which time it was an 18-20 foot wide county road.

PURPOSE OF ROUTE

The primary purpose of SR-98 is to provide east-west access for interregional, intraregional and international travel. SR-98 is an alternative to I-8 for east-west travel through Imperial County.

SR-98 runs parallel to the U.S.A./Mexico International Border and provides the closest east-west access to the Calexico/Mexicali International Border Crossing and to the Calexico/Mexicali East International Border Crossing, approximately 6.5 miles to the east of Calexico. Truck traffic through the Calexico/Mexicali East Port of Entry (POE) serves interregional, interstate, and international trade and goods movement. From 1994 to 1999, the value of trade through Calexico/Mexicali has almost tripled from $3 billion to $8.1 billion. Ninety-seven percent of this trade is transported by truck. Most commercial truck traffic crossing the U.S./Mexico border in Imperial County is required to use the Calexico East POE. The majority of auto and truck traffic generated at the Calexico East POE and State Route 7 currently use State Route 98 as an east-west connection to/from the City of Calexico. Beyond the Calexico area these commercial trucks connect with Interstate 8 (I-8) and the Southwest Passage Corridor. Most of this truck traffic will use I-8 to connect with San Diego to the west; and, the State of Arizona and other eastern destinations. To the north these trucks access primarily SR-86 as an intermediate link to Los Angeles via I-10 and/or the Interstates 5 and 15 High Priority Corridors.

SR-98 provides east-west access for many of the agricultural support roads. It also provides access to the agricultural areas.

Within Calexico, SR-98 provides for intracity travel, with many businesses, homes, schools and a hospital located adjacent to it in the city limits.

The existing facility and operating conditions for SR-98 are shown in Table S-1. The existing conditions are based on 2000 data.

TABLE S-1
EXISTING FACILITY AND OPERATING CONDITIONS

Segment/ County Post-Mile	Location	No. Lanes/ Facility Type	Average Daily Traffic	Peak Hour Operating Level of Service
1 IMP R0.3 – 28.7	West junction I-8 to Clark Road	2C	2,400	B
2 IMP 28.7 – 30.3	Clark Road to Dogwood Road	2C	9,100	B
3 IMP 30.3 - 32.3	Dogwood Road to SR-111	2C*	17,400	D/E **
4 IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4C	19,000	B**
5 IMP 32.9 -39.6	Encinas Avenue to SR-7	2C	11,400	B
6 IMP 39.6 - 42.1	SR-7 to Bonds Corner Road	2C	2,800	B
7 IMP 42.1- R56.9	Bonds Corner Road to East Junction I-8	2C	1,750	B

* The portion from PM 32.1 –32.3 is four lanes
** Level of Service at the intersection of SR-98 and SR-111 may be E or F during peak periods

2020 TRANSPORTATION CONCEPT

Table S-2 shows the 2020 Transportation Concept for SR-98.

TABLE S-2
2020 TRANSPORTATION CONCEPT

Segment/ County Post-Mile	Location	No. Lanes/ Facility Type	Average Daily Traffic	Peak Hour Operating Level of Service	Concept Level of Service
1 IMP R0.3 – 28.7	West junction I-8 to Clark Road	2C	3,400	B	D
2 IMP 28.7 – 30.3	Clark Road to Dogwood Road	2C	15,000	C	D
3 IMP 30.3 - 32.3	Dogwood Road to SR-111	2C/4C*	32,000	D	D
4 IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4C/6C	39,000	F/D	D
5 IMP 32.9 - 39.6	Encinas Avenue to SR-7	4C/6C	35,000	E/C	D
6 IMP 39.6 - 42.1	SR-7 to Bonds Corner Road	2C	5,300	B	D
7 IMP 42.1- R56.9	Bonds Corner Road to East Junction I-8	2C	2,000	B	D

* 4C is proposed from Navarro Road (PM 31.1) to Ollie Avenue (PM 32.1), 4C exists from Ollie to SR-111.
NOTE: The May 2001 Final Value Analysis report for the SR-98 corridor recommends widening from SR-7 to Bowker Road and realign SR-98 along Jasper Road to Dogwood Road. This improvement will be refined in design and several options will be evaluated.

2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS

Table S-3 shows mainlane facility improvements to SR-98 that are part of the 2020 Transportation Concept.

TABLE S-3
2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS

Segment/ County/ Post-Mile	Location	Improvement Description	Peak Hour Operating LOS	Concept Level of Service
3 IMP 31.1 - 32.1	Navarro Road to Ollie Avenue	Upgrade from 2C to 4C	D	D
4 IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4C/6C	F/D	D
5 IMP 32.9 - 39.6	Encinas Avenue to SR-7	Upgrade from 2C to 4C/6C	E/C	D

NOTE: Recommended improvements for the portion of SR-98 from Dogwood Road to SR-7 are subject to change based on future project studies.

DISTRICT 11
SR-98 TRANSPORTATION CONCEPT IMPROVEMENTS

MAP REFERENCE	LOCATION	IMPROVEMENT
1	Navarro Road to Ollie Avenue	Upgrade 2C to 4C
2	SR-111 to SR-7	Upgrade 2C to 4C/6C *

* Recommended improvements for the portion of SR-98 from Dogwood Road to SR-7 are subject to change based on future project studies.

State of California Department of Transportation
District 11 - System Planning - May 2001

INTRODUCTION AND STATEMENT OF PLANNING INTENT

The system planning process consists of three products: the District System Management Plan (DSMP), the Transportation System Development Plan (TSDP), and the Transportation Concept Report (TCR).

The DSMP describes how the District intends to maintain, manage, and improve the District transportation system over the next 20 years. The DSMP is developed in partnership with regional and local transportation planning agencies. The DSMP summarizes 20 year planning concepts and proposed transportation improvements on a system wide level, and influences the development of future transportation concepts and development plans. It integrates land use, modal opportunities, regional arterial plans, transportation system management, transportation demand management, highway system improvements, and the District highway network into a comprehensive transportation program. The DSMP serves as the foundation for the TSDP and the TCRs.

The TSDP is an internal Caltrans system planning document. Its purpose is to identify a reasonable and effective list of multimodal transportation projects(infrastructure/capital outlay) and strategies, and demand and system management options to improve statewide, interregional and regional mobility and intermodal transfer of people and goods. It includes both a Recommended Plan and a Cost Constrained Plan component, and categorizes improvements into two time frames, 2001-2015 and post-2015. It is based on analysis of current and projected future travel demand. The TSDP replaces the District 11 Route Development Plan.

The TSDP broadens the Department's assessment of mobility options at a preliminary planning stage. It expands system planning from an analysis of state highway route deficiencies to an integrated intermodal and multimodal analysis of travel corridors. The TSDP applies the principles, practices, and concepts of the Advanced Transportation System Development (ATSD) program to system planning.

Improvements, strategies, and system management options identified in the TSDP will be Caltrans "candidates" for further detailed examination in state, metropolitan, regional or local studies and processes. The TSDP is also the Department's initial identification of areas under consideration for corridor studies with local agencies and rail/transit operators.

The TCR process was discussed in the Transportation Concept Summary.

Existing Facility Classifications

The federal functional classification of SR-98 from I-8 (P.M. IMP R 0.3) to the urban/rural limit of Calexico (P.M. IMP 30.8) is a Rural Minor Arterial. The portion of SR-98 from the urban/rural limit of Calexico to Bowker Road (P.M. IMP 34.5) is a Small Urban Other Principal Arterial. The remaining portion of SR-98 from Bowker Road to I-8 (P.M. IMP R 56.9) is a Rural Minor Arterial.

SR-98 is included in the Interregional Road System (IRRS) from SR-111 to SR-7. All of SR-98 is a designated State Highway Terminal Access Route connecting to the National Truck Network as per the Surface Transportation Assistance Act (STAA), a route system federally designated for use by larger trucks. SR-98 is included in the Caltrans District 11 designated International Border Trade Corridor (IBTC) system from SR-111 to SR-7. SR-98 is classified as MSL 2 from I-8 (P.M. R0.3) to Bonds Corner Road (P.M. 42.1). The remainder of the route is MSL 3.

California Senate Bill 300, enacted in 1989, created an Interregional Road System (IRRS). Subsequently, Section 164.3 of the California Streets and Highways Code directed Caltrans to develop and submit to the Legislature an IRRS Plan by February 1, 1990. In accordance with this plan, the IRRS is a series of interregional state highway routes outside the urbanized areas that provides access to, and links between, the state's economic centers, major recreational areas, and urban and rural regions.

The IBTC system consists of transportation corridors which link ports of entry and international border regions to the existing transportation system. These corridors will be the principle conduits for movement of people and goods as the overall demand for transportation increases in and out of California and the United States.

The National Highway System (NHS) Designation Act of 1995 was enacted by Congress in November, 1995. The purpose of the NHS is to provide an integrated national highway system that serves both urban and rural America; to connect major population centers, international border crossings, ports, airports, public transportation facilities, and other major travel destinations; to meet national defense requirements; and to serve interstate and interregional travel. The new NHS includes the Interstate System routes. In Caltrans District 11, the NHS totals 789.0 km (490.3 miles). SR-98 is not included in the NHS.

To emphasize corridors that are most essential to the California economy in terms of national and international trade, a transportation network known as the Intermodal Corridors of Economic Significance (ICES) has been developed by Caltrans. To be included in the ICES system, a route should provide access between major freight intermodal facilities and serve freight traffic with the North American Free Trade Agreement (NAFTA) countries of Canada and Mexico, as

well as the Pacific Rim and other U.S. trade markets. The route should carry high interstate and international freight volumes and value important to the economy of California. SR-98 is not included in the ICES system.

SR-98 is not included on the Master Plan of State Highways Eligible for Official Scenic Highway Designation.

For maintenance programming purposes, the State Highway System has been classified as Class 1, 2, and 3 highways based on the Maintenance Service Level (MSL) descriptive definitions:

MSL 1 contains route segments in urban areas functionally classified as Interstate, Other Freeway/ Expressway, or Other Principal Arterial. In rural areas, the MSL 1 designation contains route segments functionally classified as Interstate or Other Principal Arterial.

MSL 2 contains route segments classified as an Other Freeway/Expressway or Other Principal Arterial not in MSL 1, and route segments functionally classified as minor arterials not in MSL 3.

MSL 3 indicates a route or route segment with the lowest maintenance priority. Typically, MSL 3 contains route segments functionally classified as major or minor collectors and local roads, route segments with relatively low traffic volumes, and route segments being considered for relinquishment, rescission, or where a new alignment will replace the existing facility. Route segments where the District does not anticipate spending money and route segments where route continuity is necessary are also assigned an MSL 3 designation.

Route Segments

SR-98 will be examined in seven segments for traffic analysis purposes. Table 1 lists the segments for this route and includes some of the information used as criteria for segment divisions. It also includes the functional classification for each segment.

TABLE 1
ROUTE SEGMENTATION

Segment/ County Post-Mile	Location	No. Lanes/ Facility Type	Rural/ Urban	Functional Classification
1 IMP R0.3 – 28.7	West Junction I-8 to Clark Road	2/Conventional	R	Minor Arterial
IMP 28.7 – 30.3	Clark Road to Dogwood Road	2/Conventional	U	Other Principal Arterial
3 IMP 30.3 - 32.3	Dogwood Road to SR-111	2/Conventional*	U	Other Principal Arterial
IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4/Conventional	U	Other Principal Arterial
5 IMP 32.9 -39.6	Encinas Avenue to SR-7	2/Conventional	U	Other Principal Arterial**
IMP 39.6 - 42.1	SR-7 to Bonds Corner Road	2/Conventional	R	Minor Arterial
7 IMP 42.1- R56.9	Bonds Corner Road to East Junction I-8	2/Conventional	R	Minor Arterial

*4C from P.M. IMP 32.1 to P.M. IMP 32.2
** from PM 32.9 to PM 34.5. Minor Arterial for remainder of segment.

Existing Facility

SR-98 is a conventional highway traversing through desert and agricultural areas on a flat gradeline. Segments 1, 2 and 5 through 7 are two lane conventional highways and a portion of segment 3 and all of segment 4 are a four lane conventional highway.

A physical description of the existing facility in a segment specific format is shown in Table 2.

TABLE 2
EXISTING FACILITY GEOMETRICS

Segment/County Post-Mile	No. Lanes Facility Width	Outside Shoulder Width	Inside Shoulder Width	Max. R/W Width	Median Width	Grade Line
1 IMP R0.3 – 28.7	2C @ 3.7-4.3 (12–14)	0.61-3.0(2-10)	0	0-61.0 (0-200)	0-30.2 (0-99)	Flat
IMP 28.7 – 30.3	2C @ 3.7 (12)	0.61-2.4 (2-8)	0	15.2 (50)-18.3 (60)	0-3.7 (0-12)	Flat
3 IMP 30.3 - 32.3	2C* @ 3.7 (12)	1.2-3.0 (4-10)	0	18.3 (60)	0-3.7 (0-12)	Flat
IMP 32.3 - 32.9	4C @ 3.7 (12)	1.2-2.4(4- 8)	0	27.4 (90)	3.7-5.9 (12-18)	Flat
5 IMP 32.9 -39.6	2C @3.7 (12)	1.8-2.4 (6- 8)	0	30.5 (100)	0-3.7 (0-12)	Flat
IMP 39.6 - 42.1	2C @ 3.7 (12)	2.4 (8)	0	30.5 (100)	0	Flat
7 IMP 42.1- R56.9	2C @ 3.7 (12)	2.4-3.7 (8-12)	0	61.0 (200)	0	Flat

Grade Line Designations:
2C = Two lane conventional facility
4C = Four lane conventional facility
R/W = Right of Way

* 4C from P.M. IMP. 32.1 to P.M. IMP. 32.2
Note: Widths are in meters (parenthesis widths are in feet)

There are several arterial streets that parallel or intersect SR-98 that could provide alternative routes for travel. Listed in Table 4 are some significant arterials that parallel or intersect SR-98. However, some of these streets may fail

to provide an efficient alternative due to physical inadequacies and access conflicts. Improvements may be required.

TABLE 3
SIGNIFICANT ARTERIAL STREETS IN RELATION TO THE SR-98 CORRIDOR

Arterial Name	Description	I/P
Kubler Road	Drew Road to Clark Road	P
Evan Hewes Hwy.	W. Jct. I-8 to E. Jct. I-8	P
Interstate 8	W. Jct. SR-98 to E. Jct. SR-98	P
Dogwood Road	SR-98 to SR-78	I
Cole Road	Calexico WCL to Bowker Road	P
Anza Road	Pulliam Road to Barbara Worth Road	P
Heber Road	La Brucherie Road to Vencil Road	P
Ross Road	Haskel Road to Mets Road	P
McCabe Road	Silsbee Road to Towland Road	P
SR-111	Calexico Border Crossing to I-10	I
Bowker Road	Anza Road to S-80	I
Barbara Worth Road	Anza Road to S-80	I
Proposed SR-7	Proposed International Border Crossing to I-8	I
Bonds Corner Road	SR-98 to I-8	I

P = Parallel
I = Intersect

The Countywide Transit System in Imperial County has eleven fixed bus routes, four of which provide early morning express service to Imperial Valley College. The City of El Centro is the hub of CTS and is linked via Westmoreland to Niland, via Heber to Calexico, and directly to Holtville. Service between Winterhaven and Yuma, as well as Bombay Beach and Brawley are the only non-El Centro based CTS routes. Weekday and Saturday service is provided for the regular routes except for Friday only Winterhaven/Yuma service, and Thursday-only service between Bombay Beach and Brawley.

With the passage of the American with Disabilities Act, Areawide Independent Mobility (AIM) was established to provide lift-equipped demand responsive service for those who are unable to use CTS's fixed route service. By statute, AIM must operate during the same hours and days as CTS. It is available to mobility disadvantaged persons, and on a space available basis to seniors over 60.

The Imperial Valley Association of Governments funds both CTS and AIM as well as Brawley, Imperial, El Centro, Salton City and Calexico Dial-A-Rides. CTS, AIM and Salton City services are contracted out by the County of Imperial Public Works Department. CTS is currently managed by a non-profit governmental agency with bus service being provided by a private-for-profit subcontractor. The other cities contract for their dial-a-ride services directly.

Dial-a-ride demand response services provide intracity service and connections to CTS. However, the City of Imperial, which is largely residential, offers its citizens daily access to El Centro's government services and business districts. On Thursdays, the Salton City Dial-a-Ride provides transportation to Westmoreland where riders can access CTS.

Greyhound Lines Inc., a private intercity bus service, operates an express route connecting San Diego, El Cajon, El Centro and Calexico to Yuma (and other cities in Arizona). It goes as far as Phoenix, and has one flag stop in Ocotillo, California (A flag stop is an informal, usually designated bus stop where the bus will stop only if hailed by a customer). Five runs daily are made to San Diego from Calexico via El Centro, and three runs into Arizona from Calexico via El Centro.

Greyhound also makes nine daily trips north from Calexico through El Centro to Indio, Riverside, to eventually reach Los Angeles. Ten daily return trips are also available. The local route to Niland follows Imperial 111 around the east side of the Salton Sea with stops at Mecca, Thermal and Coachella. Some of the express routes that follow SR 86 on the Salton Sea's west side make flag stops at Westmoreland and Salton City.

Numero Uno, a subsidiary of Laidlaw (owner of Greyhound), provides on the hour, every hour shuttle service between Calexico and El Centro throughout the day and early evening, everyday.

Cruceros, another private bus company, operates two daily express buses which travel from Mexicali to LA in the morning, and then return in the evening. Calexico and El Centro are the only stops enroute.

SOCIO-ECONOMICS

This section includes a land use/corridor growth and demographic analysis for existing and future conditions in the SR-98 corridor.

Corridor Growth and Demographics

Because of its size, its year round growing season and its rich lake deposited soil; Imperial Valley is a major agricultural resource for the entire country. The farming area has had irrigation for about 100 years. Imperial County land use policies support the preservation of agricultural lands in the unincorporated areas.

In addition to the agricultural area, Imperial County has very popular recreational areas including: The Salton Sea, the Anza-Borrego Desert State Park, the Imperial Sand Dunes, the Colorado River, and access to the Gulf of California.

The majority of the population growth will occur within or adjacent to existing communities. The relatively new Calexico East Port-of Entry at the United States/Mexico border will assist in accommodating expected increases in international trade as a result of the North American Free Trade Agreement (NAFTA) and policies established by the World Trade Organization (WTO). Associated growth of Maquiladora industries (twin plants on both sides of the border) will also have an influence on the amount and location of growth in Imperial County and Mexicali, Mexico.

Potential developments that would induce growth include new State prisons near Calipatria and Seeley, the expansion of the international airport at Calexico, and the growth of the geothermal industry located in the Salton Sea area west of Calipatria and southwest of Niland.

The enrollment of the Imperial Valley College is anticipated to double to 10,000 students by the year 2000. The college is located at the intersection of SR-111 and Aten Road. The Imperial Valley campus of San Diego State University currently has almost 800 students, and student enrollment is expected to increase in the future. The campus is located in the City of Calexico.

Table 4 lists current and future housing, population and employment data for the areas adjacent to SR-98 in Imperial County.

TABLE 4
POPULATION, HOUSING AND EMPLOYMENT GROWTH
SELECTED IMPERIAL COUNTY JURISDICTIONS

Location	Year	Total Population	% Change from Base Year	Total Households	% Change from Base Year	Total Employment	% Change from Base Year
Calexico	2000	30,081	N/A	6,298	N/A	8,751	N/A
	2005	33,070	10%	7,093	13%	9,707	10%
	2010	37,897	25%	8,123	28%	10,525	20%
	2015	42,120	40%	9,272	47%	11,522	31%
	2020	47,302	57%	10,779	71%	12,594	40%
El Centro	2000	37,089	N/A	10,895	N/A	15,456	N/A
	2005	37,897	2%	11,231	3%	15,501	0.3%
	2010	39,156	6%	11,666	7%	15,539	0.5%
	2015	40,342	9%	12,150	12%	15,586	0.8%
	2020	41,743	13%	12,754	17%	15,637	1%
Holtville	2000	5,631	N/A	1,586	N/A	5,537	N/A
	2005	5,750	2%	1,639	3%	5,591	1%
	2010	5,935	5%	1,705	8%	5,519	-0.03%
	2015	6,110	9%	1,780	12%	5,453	-1.5%
	2020	6,317	12%	1,872	18%	5,477	-1%
Unincorporated	2000	39,422	N/A	13,397	N/A	14,204	N/A
	2005	53,382	35%	18,101	35%	17,652	24%
	2010	75,149	91%	24,207	80%	20,600	45%
	2015	95,675	142%	31,012	131%	24,192	70%
	2020	119,889	204%	39,369	193%	28,051	97%

Source: SCAG Demographic Forecasts (Adopted April, 1998)

Imperial County

The seven incorporated cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland account for three quarters of the total population of Imperial County. However, as more Specific Plan Areas (SPAs) are developed, the unincorporated areas are projected to have a 204% percent increase in population from 2000 to 2020, while the incorporated cities are expected to grow 95 percent in the same time period. A 157 percent increase in housing stock and a 95 percent growth in employment is projected for Imperial County between 1990 and 2020.

The Imperial Valley is one of the world's most fertile agricultural areas, due to the rich productive soil, abundant sunlight, flat topology and imported Colorado River water. The wide range of crops grown include vegetables, such as lettuce, carrots, onions, tomatoes, cauliflower and broccoli; animal feed, such as Sudan grass and alfalfa; grains, such as wheat; sugar beets; melons; cotton; and various citrus, fruits and nuts. Seed crops, bee products and nursery plants are also produced.

Livestock production is the second major form of agricultural production, and includes beef cattle, sheep, wool, dairy products and swine.

Imperial County is one of the most productive agricultural regions in the world. Since irrigation water was introduced in 1901, agriculture has been the single most important economic activity of Imperial County. Agriculture and its related industries employ 35 percent of the work force. Government is the second largest employer with 21 percent, followed by retail trade with 15 percent. Other significant contributors to the economy include winter visitors, State prisons near Calipatria and Seeley, the growing geothermal industry, mining, the second Mexico/USA border crossing at Calexico, and increased trade as a result of the North American Free Trade Agreement (NAFTA).

Imperial County is rich in geothermal resources. While Imperial County is a national leader in the development of its geothermal resources, development has not progressed as rapidly as projected due to high operating costs, slow growth in utility company demand and the relatively low cost of oil.

Calexico

The City of Calexico is situated adjacent to SR-111 and SR-98 and on the U.S./Mexico international border. The City of Calexico encompasses 14 square miles. Calexico has a 2000 population of 30,100 and is the fastest growing city in Imperial County. The population of Calexico is expected to increase to 47,300 by the year 2020.

The housing market in Calexico is relatively tight, with a 1990 vacancy rate of 2.1%. The average number of persons per occupied housing units in Calexico is 3.92. Growth in housing is projected to occur at a slower pace than population growth, resulting in an increasingly tight housing market.

Calexico began as a tent city of the Imperial Land Company in 1900 and was incorporated as a city in 1908. As it has grown, unique shopping malls and modern retail establishments have developed offering a wide selection of fine jewelry, clothing, perfumes, and local handicrafts from Mexico.

In order to assist economically distressed areas throughout California, the Enterprise Zone Program was developed by the California Trade and Commerce Agency. Special state and local incentives encourage business investment and promote the creation of new jobs. A 1.37 square mile Enterprise Zone has been created in Calexico. It includes area firms such as Wal-Mart, Chief Auto Parts, Bianchi International, Pep Boys, Western Auto and Heilig Meyers. Because of Calexico's unique location adjacent to the U.S/Mexico border, there are 18 common carriers providing interstate and intrastate truck service to transportation

hubs throughout the nation. Overnight trucking access also serves the Ports of Long Beach, San Diego and Ensenada, Baja California.

Mexicali

Directly south of Calexico, California, across the International Border, lies the Capital of Baja California, Mexicali, Mexico, a thriving and growing city, with an official 1995 population of 696,034. Average annual growth for both population and employment in Mexicali is projected to be 2.9% per year. Mexicali has experienced a 1,907 percent increase in population since 1930. Mexicali's population for the year 2020 is projected to be 1,141,918, and employment is expected to increase from 200,104 in 1990 to 410,399 in 2020.

The economy of Mexicali has been historically centered around the agricultural industry. Major crops include grains, vegetables and cotton. The economy of Mexicali has recently been stimulated by the development of Maquiladora industrial plants. These plants provide labor-intensive manufacturing services for U.S.-based industries. Mexicali currently has 199 Maquiladoras, an increase from 172 Maquiladoras in 1998. In addition, Mexicali has about 1,200 industrial plants, 5,000 commercial business firms, and 1,700 service-oriented companies.

El Centro

The City of El Centro is located along I-8, approximately 193.12 km. (120 miles) from downtown San Diego. El Centro had a 2000 population of 37,100, making it the most populous city in Imperial County. El Centro has historically experienced a relatively slow rate of growth, with an annual average population increase of 2 percent.

El Centro's economy differs somewhat from the rest of Imperial County's agriculturally based economy. As the County seat of Imperial, El Centro's economy is dominated by professional and related services (approximately 30 percent of workforce), followed by retail trade and public administration. There is a substantial amount of public-sector employment, with El Centro serving as the headquarters for the County of Imperial's administrative offices. In addition, several City, State, and Federal government offices are located in downtown El Centro.

Intergovernmental Review

A methodology to ensure compatibility between land use and the statewide transportation system is the Caltrans Intergovernmental Review process. Potential future development projects are analyzed to determine what impacts they may have on State transportation facilities. Impacts can include level of service changes, right of way protection issues, operations and/or maintenance issues, or growth inducing/cumulative impacts. Intergovernmental Review also analyzes proposed developments to ensure consistency with regional and state transportation planning documents.

Potential major development projects in the vicinity of the SR-98 corridor that may contribute to traffic congestion on area surface streets and state transportation facilities are shown in Table 5. It should also be noted that the table includes projects for which an Environmental Impact Report, a Specific Plan or a Master Plan has been or will be prepared. Smaller projects that have the potential to create cumulative impacts to SR-98 and area surfaces streets are not shown in Table 5. Because of uncertainties associated with the existing and future socioeconomic and political climates, the scale of development may be subject to change, and it is possible that some of the listed projects may not be developed. In addition, Table 5 does not reflect potential future developments in Mexicali that could occur as new arterial streets are constructed in Mexicali.

TABLE 5
TRIP INDUCING MAJOR DEVELOPMENT PROJECTS

Segment	Proposed Development	Dwelling Units or Square Meters (Sq. Ft)	Acreage in hectares (acres)	Trips Generated Daily
4	Crossroads Plaza Shopping Center	20,252 (218,000)		15,250
5	Eastland Village/ Rancho Villa Nova	628	64 (159)	7,000
5	Tierrasanta Subdivision	368	18 (44)	3,000
6	Gateway Specific Plan		575 (1420)	111,900*

*22,380 trips per day on SR-98 are projected for the year 2020.

Source: Caltrans District 11 Intergovernmental Review

The 1993 Imperial County General Plan Update identifies several Specific Plan Areas (SPA) within the county that could have an effect on future operating conditions on SR-98 and other State highway facilities. The intent of the General Plan in regard to the SPA is to ensure that future development occurring within the designated areas is in conformance with the County's General Plan Land Use Element. Any new developments proposed within the SPA must have an

approved Specific Plan prior to commencement of development activities. Table 6 lists several Imperial County SPAS.

TABLE 6
IMPERIAL COUNTY SPECIFIC PLAN AREAS

Imperial County Specific Plan Areas	Type of Development
Tamarack Canyon Ranch SPA	Resort/Recreational
Mesquite Lake SPA	Light, Medium And Heavy Industrial
Glamis SPA	Commercial/Retail/Services
Calexico East SPA	Commercial/Industrial/Residential
Luckey Ranch	Commercial/Industrial/Residential

The existing Calexico POE is the second busiest U.S./Mexico International Border crossing in California. Overall, the Calexico POE experienced a 24.3% increase in the number of total conveyance arrivals between 1995 to 1999. The total person arrivals for the same time period also increased by 24.5%. Table 7 shows this data by each transportation mode.

TABLE 7
CALEXICO PORT OF ENTRY

Conveyance Arrivals	**1995**	**1996**	**1997**	**1998**	**1999**
Trucks	176,420	169,403	190,150	222,160	250,063
Buses	1,627	1,703	1,505	2,281	2,085
Passenger Vehicles	7,328,311	6,705,342	7,888,621	8,589,613	9,084,666
Trains	264	252	248	245	248
Rail Cars	5,001	6,582	5,600	5,089	6,513
Aircraft	2,862	4,533	3,987	3,559	3,370
Total:	**7,514,485**	**6,887,815**	**8,090,111**	**8,822,947**	**9,346,945**
Person Arrivals					
Via Truck	213,303	220,220	241,156	288,735	324,925
Via Bus	34,538	33,711	27,511	55,768	43,555
Via Passenger Vehicle	21,838,367	19,604,702	23,469,981	25,597,050	27,072,292
Via Train	-	-	1,539	1,715	1,736
On Foot (Pedestrians)	6,727,378	8,299,710	7,937,286	8,556,140	8,445,163
Via Aircraft	12,794	11,322	11,464	10,109	10,402
Total:	**28,826,380**	**28,169,665**	**31,688,937**	**34,509,517**	**35,898,073**

Source: U.S. Customs, San Diego

Mexico is providing infrastructure to accommodate future travel growth and trade increases and to entice development to the surrounding area. Currently, a new four lane limited access toll road from Tijuana to Mexicali is being constructed. The first segment from Tijuana to Tecate, Mexico was completed in December, 1992, the second segment from Tecate to La Rumarosa was completed in January, 1998, and the remaining segment from La Rumarosa to Mexicali is scheduled for future completion.

2020 TRANSPORTATION CONCEPT

The 2020 Transportation Concept includes State highway, transit service, system management and demand management, goods movement, International border, and aviation and nonmotorized components. The segmentation shown is for planning purposes only and is subject to change pending further studies or project-related activities. The State highway component is comprised of the facility type and the number of lanes for 2020, the ADT for 2020, the peak hour Volume to Capacity (V/C) Ratio for 2020, the peak hour Operating Level of Service (LOS) for 2020, and the Transportation Concept LOS for 2020. The 2020 traffic projections for SR-98 are based on the Imperial Valley Transportation Model. The 2020 traffic projections are subject to change based on periodic traffic forecasting model adjustments and ongoing supplemental transportation studies.

The 2020 peak hour Operating LOS includes all proposed facility improvements. It also includes expansion and greater utilization of the existing arterial street network. Table 8 shows the 2020 Transportation Concept for SR-98.

TABLE 8
2020 TRANSPORTATION CONCEPT

Segment/ County Post-Mile	Location	No. Lanes/ Facility Type	Average Daily Traffic	Peak Hour Operating Level of Service	Concept Level of Service
IMP R0.3 – 28.7	West junction I-8 to Clark Road	2C	3,400	B	D
2 IMP 28.7 – 30.3	Clark Road to Dogwood Road	2C	15,000	C	D
IMP 30.3 - 32.3	Dogwood Road to SR-111	2C/4C*	32,000	D	D
4 IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4C/6C	39,000	F/D	D
IMP 32.9 -39.6	Encinas Avenue to SR-7	4C/6C	35,000	E/C	D
6 IMP 39.6 - 42.1	SR-7 to Bonds Corner Road	2C	5,300	B	D
IMP 42.1- R56.9	Bonds Corner Road to East Junction I-8	2C	2,000	B	D

* 4C is from Navarro Road (PM 31.1) to Ollie Avenue (PM 32.1), already 4C from Ollie Avenue to SR-111.
NOTE: The May 2001 Final Value Analysis report for the SR-98 corridor recommends widening from SR-7 to Bowker Road and realign SR-98 along Jasper Road to Dogwood Road. This improvement will be refined in design and several options will be evaluated.

CONCEPT RATIONALE

An intermodal approach is necessary in order to provide for the projected increased vehicle trips and person-trips in the SR-98 corridor. This approach utilizes a wide variety of transportation improvement components to help achieve the 2020 Transportation Concept LOS.

Highway Component

For Segment 1, there is a proposed pavement rehabilitation project from PM 0.3-21.9. The project will also widen the outside shoulders from 0.61 meters to 2.4 meters on each side of the highway to provide the minimum standard paved surface of 12.0 meters.

The 2020 Transportation Concept proposes widening a portion of Segment 3 (David Navarro Road to Ollie Avenue) from a 2 lane conventional highway to a 4 lane conventional highway. In addition, the intersection at SR-98/Lee Road will be realigned opposite the SR-98/ V.V. Williams intersection and will besignalized and illuminated. Sidewalks will also be constructed along both sides of SR-98 and a storm drain system will be provided from Kloke Road to Lee Road. The portion of segment 3 from Ollie Avenue to SR-111 is an existing four lane facility.

For Segments 3,4, and 5 (Dogwood Road to SR-7), the 2020 Transportation Concept Report calls for a four to six lane facility with the actual alignment to be determined based on further study. Related to this, the November, 2000 Preliminary Value Analysis (VA) Study Report for the SR-98 corridor prepared by Value Management Strategies, Inc in conjunction with Caltrans District 11 identifies the following alternatives:

• Alternative 1.1 Widen existing SR-98 to four and/or six lanes from SR-7 to Dogwood Road

• Alternative 1.2 Widen SR-98 from SR-7 to Cole road and realign SR-98 along Cole Road to Dogwood Road

• Alternative 1.3 Realign SR-98 to a six lane conventional highway from SR-7 along Jasper Road to Dogwood Road

• Alternative 1.4 Widen SR-98 from SR-7 to Bowker Road and realign SR-98 along Jasper Road to Dogwood Road

• Alternative 1.5 Widen SR-98 from SR-7 to Barbara Worth Road and realign SR-98 along Jasper Road to Dogwood Road

The May 2001 Final VA Report for the SR-98 corridor recommended dropping further study of Alternatives 1.2, 1.3 and 1.5. This decision was based on VA Team discussions with project stakeholders, including representatives from the City of Calexico, local landowners, developers, County of Imperial and Caltrans District 11.

The Final VA Report supports further analysis of Alternatives 1.4 and 1.1. Pursuing Alternative 1.4 in conjunction with widening along the current alignment during the Project Analysis/Environmental Document (PA&ED) phase would permit the acceleration of the widening along SR-98 from SR-7 to Cole Road, as this segment is common to the two alignments. This segment could be addressed as a separate project and kept separate of any realignment issues.

The Imperial Valley Association of Governments (IVAG) has allocated $2.5 million for environmental studies and a Project Report for SR-98.

The cost to widen SR-98 between SR-111 and SR-7 to four lanes is estimated at $50 million. To meet the ongoing transportation needs of the international border region, California Governor Gray Davis' Traffic Congestion Relief Plan (TCRP) has earmarked $10 million to this SR-98 widening project.

For Segment 7, there is a proposed pavement rehabilitation project from PM 45.9-R56.9. The project will also widen the outside shoulders from 0.61 meters to 2.4 meters on each side of the highway to provide the minimum standard paved surface of 12.0 meters.

The Cole Road Corridor Study (December 2000) prepared by Dahl, Robins, and Associates, Inc. for the City of Calexico was completed to determine and analyze the potential traffic impacts of the existing, proposed, and expected development along the Cole Road corridor and to recommend improvements necessary to ensure safe and efficient operation on the street. In particular, the report recommends widening Cole Road from two lanes to four lanes with additional turn lanes.

The Downtown Calexico/Mexicali Border Transportation Study (June 2000) prepared by Katz, Okitsu, and Associates for Caltrans recommends border area improvements that will enhance local traffic circulation, airport access and rail traffic circulation. These could include roadway reconfigurations, intersection modifications, grade separations, and the reuse of the former commercial POE. The west boundary of the study area is Cesar Chavez Boulevard, the North boundary is SR-98, and the east boundary is approximately SR-111. The study conclusively illustrates the need for additional border crossing capacity to service the existing and future cross-border traffic.

There is a strong interrelationship between SR-98 and SR-7 due to the Calexico East International Border Crossing, also known as the Calexico East Port of Entry (POE).

SR-7 is a new state highway that has been constructed east of Calexico to serve the new Port of Entry (POE). The first phase of SR-7 between the border crossing and SR-98 was completed in March 1996. This new POE and SR-7 support trade growth and the approved North American Free Trade Agreement (NAFTA) between the United States and Mexico. It provides adequate border infrastructure to accommodate the anticipated increase in commercial carrier activity between the U.S. and Mexico. The new border crossing also relieves existing congestion at the existing downtown Calexico POE on SR-111 and reduces the environmental effects of border traffic delays. Commercial vehicle traffic from the Calexico East POE currently traverses both SR-7 and SR-98.

The portion of SR-7 from SR-98 to I-8 is currently unconstructed. A Draft Project Study Report on this second segment was completed in June, 1994. Several alternative alignment options were examined, including Orchard Road, Barbara Worth Road, or improving SR-98 from the SR-7/SR-98 junction to SR-111. The Orchard Road alignment has been selected, and the four lane facility is currently being designed.

In order to further document the increase in transborder commercial vehicle traffic resulting from increased international trade, Caltrans conducted a Border Crossing and Customhouse Broker Survey in March, 1993. The survey results included the annual number of truck trips and commodity tonnage that pass through California Ports-of-Entry (POEs). The survey also determined the number and percentage of truck trips and commodity tonnage that remain in California or leave the state, as well as the origins and destinations of the truck trips and commodity tonnage by state or by California county. Further information regarding this goods movement survey can be found in a Caltrans report entitled Transportation Issues Along the California/Mexico Border dated September, 1993.

Transit Component

Currently, there is no passenger rail service directly to Imperial County. However, the California State Legislature has officially designated a commuter rail route referred to as the Los Angeles/Coachella Valley/Calexico Rail Corridor. This corridor was analyzed in depth in the Los Angeles/Coachella/Calexico Rail Corridor Study done by Caltrans in March 1995. The Imperial County Transportation Plan Rail Vision (Adopted February, 1998) provided further analysis of rail issues. The studies indicated that the future of passenger rail service in Imperial County is dependent upon a variety of factors, including:

- Determining whether there is a market for passenger rail and if so, can rail compete with bus and air travel?
- The selection and implementation of immigration and customs' procedures
- The need for expensive rail improvement in both Mexico and the United States when considering Mexico City to Los Angeles travel
- The impact from rail privatization in Mexico
- Commitment by the rail authority in Mexico to passenger rail
- Restrictions on operating equipment from foreign countries on U.S. rail lines

Regarding bus transit services, it is expected that existing systems will continue to operate. Expansion of bus services could occur in the future as population increases and if demand is warranted.

The County of Imperial has hired a consultant to develop a future transportation plan focusing on transit needs in Imperial County.

System Management and Travel Reduction Component

To further enhance the efficient movement of people, goods and services, Transportation System Management (TSM) and Transportation Demand Management (TDM) improvements could be implemented where appropriate.

Goods Movement Component

Under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, additional emphasis was placed on the movement of goods in an integrated transportation network. It is essential to identify critical elements within major goods movement corridors in order to develop effective strategies for managing, maintaining and improving transportation system connectivity. Goods movement planning incorporates analysis of impacts on noise, air quality, land use, congestion and safety. Goods movement issues can have a significant economic impact on our regional economy.

On June 9, 1998, the President signed into law PL 105-178, the Transportation Equity Act for the 21st Century (TEA-21) authorizing highway, highway safety, transit and other surface transportation programs for 6 years. TEA-21 builds on the initiatives established in the ISTEA. TEA-21 adds some new programs that address traffic safety, economic competitiveness and international trade. Currently, a TEA-21 application under sections 1118 and 1119 has been submitted for funding the widening of SR-98 from SR-111 to SR-7.

As indicated in an earlier section of this report, SR-98 is a crucial goods movement route in Imperial County. SR-98 is part of the Intermodal Corridor of Economic Significance (ICES) system.

From 1996 to 1999, the value of trade through Calexico/ Mexicali has almost tripled from $3 billion to $8.1 billion. Ninety-seven percent of this trade is transported by truck. The majority of auto and truck traffic crossing at the Calexico East POE use SR-98 as an east-west connection to and from the City of Calexico. Beyond the Calexico area these commercial trucks connect with I-8 and the Southwest Passage Corridor. Most of this truck traffic will use I-8 to connect with San Diego to the west, and the State of Arizona and other eastern destinations. To the north these trucks access SR-86 as an intermediate link to Los Angeles via I-10 and the I-5/I-15 High Priority Corridors.

The number of trucks crossing at the Calexico Ports of Entry has increasd from 282,800 (both directions) in 1988 to 444,200 (both directions). Based on post-NAFTA historical trends from 1993 to 1998, the two-way truck traffic is projected to increase to 868,400 by the year 2020.

There is a small amount of freight rail traffic coming through the Calexico/Mexicali gateway. The Mexican railway that connects with the Union Pacific Calexico Branch Line is owned and operated by the Ferrocarril Nacionales de Mexico (FNM). The total number of rail car crossings through the Calexico POE totalled approximately 3,000 in 1994. Freight service heading north and south on the Calexico Branch Line consists of one to three trains operating daily depending on the season. Typical cargo carried on this line includes agricultural products, coal, petroleum, automobiles, lumber, steel and iron ore.

International Border Component

The ISTEA required studying the advisability of establishing a discretionary international border crossing program and the development of a multimodal assessment of existing and emerging international trade corridors within Canada, Mexico and the United States. Because of District 11's geographic location adjacent to the State of Baja California, Mexico, and the passage of the North American Free Trade Agreement (NAFTA), it is expected that transportation and trade issues related to the California/Mexico International border will increase in importance in the future for Caltrans District 11.

Improvements to SR-98 may assist in accommodating increased trade due to NAFTA and the policies implemented by the World Trade Organization (WTO).

Aviation Component

There are several small airports serving general aviation air travel in the Imperial Valley and/or near to SR-98. The Calexico International Airport is just south of SR-98 and currently averages 74 aircraft operations per day. Brawley Municipal Airport is just northeast of Brawley and averages 137 aircraft operations per day. Cliff Hatfield Memorial Airport in Calipatria averages 92 aircraft operations per day.

In addition, the Mexicali Airport has regularly scheduled jet service to various cities in Mexico has been privatized.

Non-Motorized Component

Bicycle travel is allowable on SR-98.

In conjunction with SCAG, the County of Imperial has proposed the development of an Imperial County Bicycle Plan.

AIR QUALITY

The federal Clean Air Act (CAA) forms the basis for the national air pollution control effort. A basic element of the CAA is the National Ambient Air Quality Standards (NAAQS), which require that certain pollutants do not exceed specified levels. The threshold for each pollutant ensures protection for sensitive groups of the population. California has adopted state air quality standards that are more protective than the NAAQS. Areas with levels that exceed the standard for specified pollutants are designated as "non-attainment areas".

The federal CAA requires each state containing non-attainment areas to submit a State Implementation Plan (SIP) to the federal Environmental Protection Agency (EPA), stating measures to be taken to attain the NAAQS by a specified attainment deadline. The Imperial County Air Pollution Control District (APCD) prepares the Imperial County portion of the California SIP.

A lack of congressional action to reauthorize the federal CAA served as the impetus for the California Legislature to address the state's continuing effort to improve air quality. In 1988, the California Clean Air Act (CCAA) was enacted requiring the APCD to prepare a revised Regional Air Quality Strategy (RAQS) for achieving the state and federal air quality standards.

State Route 98 is located in the Salton Sea Air Basin. Progress has been made in the Air Basin in attaining federal and state air quality standards. Federal and state standards have been met for lead, nitrogen dioxide, and sulfur dioxide.

Federal standards are being met for carbon monoxide (CO) while state standards are being met with the exception of the City of Calexico.

Federal and state standards for PM10 are not being met. Portions of the Salton Sea Air Basin are classified as a federal "moderate" PM10 non-attainment area. PM10 standards are exceeded primarily due to field burning, wind erosion of cultivated cropland, travel on unpaved roads, construction activities and refuse burning in Mexicali, Mexico. The possible addition of a PM2.5 standard may change the Air Basin's federal status as it relates to inhalable particulates.

Currently, the Salton Sea Air Basin is classified as a "transitional" ozone non-attainment area under both the state and federal Clean Air Acts. The non-attainment classification, based on the amount of pollutant above the one hour standard, determines the minimum state and federal control requirements and the federal attainment deadline for the Air Basin. The current federal one-hour standard for ozone may soon be altered to an eight hour standard. If this occurs, there should be no change in the Air Basin's ozone classification. Pollution transported into the Salton Sea Air Basin, via prevailing winds from Mexico and the greater Los Angeles region, prevents Imperial County from obtaining the ozone standard. Ozone attainment would be reached when the region has three consecutive clean years.

INTELLIGENT TRANSPORTATION SYSTEM (ITS)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) called for the creation of an economically efficient and environmentally sound transportation system that will move people and goods in an energy efficient manner. This can no longer be done simply by adding to the existing highway system. The Intelligent Transportation System (ITS) offers the potential to improve safety and efficiency in nearly every function of our complex multimodal transportation system by applying a broad range of diverse technologies. The U.S. Department of Transportation has defined an Intelligent Transportation Infrastructure (ITI) Program consisting of traffic detection, monitoring, communications and control systems required to support a variety of ITS products and services.

New Technology

ITI/ITS Programs offer the potential to deploy and operate traffic signal control systems, freeway management systems, transit management systems, incident management systems, electronic fare payment systems, electronic collection systems and multimodal traveler information systems.

The Secure Electronic Network for Traveler’s Rapid Inspection (SENTRI) Program, a National Performance Review Program is deploying Dedicated Commuter Lanes (DCLs) and Exit Control Systems (ECSs) at Otay Mesa, San

Ysidro, El Paso, Hidalgo, Calexico and other Southwest international POEs. Both DCLs and ECSs utilize automated vehicle identification for positive identification of vehicles.

Future SENTRI applications for border crossings include the development of the In-Vehicle Voice Verification System (IVVVS). A border crossing commuter will be asked to record a voice message that will be stored in the Immigration and Naturalization Service database. When crossing the border, the commuter will articulate the same predetermined phrase into a unit that looks like a telephone handset. The vocalization will verify that the speaker is a participant in the program. The entire process will take only a few seconds and allow an expeditious crossing.

The two San Ysidro DCL's have been operational since September,2000. Otay Mesa has one DCL and work is underway to upgrade that system to the standard configuration

License Plate Readers (LPRs) exist on the inbound and outbound I-5 lanes at the San Ysidro POE. LPRs are also used at the Calexico East POE for the inbound and outbound lanes.

The North American Trade Prototype (NATAP) was developed by the U.S., Canada and Mexico to streamline the customs clearance of commercial goods across the border. NATAP was deployed at six sites, including Otay Mesa, in 1998. Successful aspects of NATAP have been incorporated into mainstream U.S. Customs procedures for the exchange of information between traders, carriers, brokers and Customs.

Additional detailed information regarding new technology issues at the U.S./Mexico is included in the *Southern California Priority Corridor ITS Strategic Development Plan – Commercial Vehicle/International Border Crossing Element (Final Draft, January, 1998)* prepared by consultants' Parsons Brinckerhoff Farradyne Inc. and Transcore.

COMPARISON OF CONCEPTS

The purpose of this section is to document alternative Transportation Concepts that were considered. The Concept from the December, 1994 Route Concept Report (RCR) for the year 2015 is compared with this 2000 TCR for the year 2020. Table 9 is comprised of a segment by segment comparison between the 1992 Route Concept Report and this current updated Transportation Concept Report.

TABLE 9
COMPARISON OF 2015 AND 2020 CONCEPTS

	1994 Route Concept for 2015			2000 Transportation Concept for 2020	
	Segment/County Post-Mile	No. Lanes/ Facility Type		Segment/County Post-Mile	No. Lanes/ Facility Type
1	IMP R0.3 - 30.8	2C		IMP R0.3 – 28.7	2C
2	IMP 30.8 - 31.6	2C	2	IMP 28.7 – 30.3	2C
3	IMP 31.6 - 32.3	4C	3	IMP 30.3 - 32.3	4C
4	IMP 32.3 - 32.9	4C	4	IMP 32.3 - 32.9	4C/6C
5	IMP 32.9 - 34.5	4C	5	IMP 32.9 -39.6	4C/6C
6	IMP 34.5 - 39.6	4C	6	IMP 39.6 - 42.1	2C
7	IMP 39.6 - 42.1	2C	7	IMP 42.1- R56.9	2C
8	IMP 42.1 - R56.9	2C			

2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS

Table 10 shows improvements to SR-98 that are part of the 2020 Transportation Concept. This table does not include projects currently under construction. The peak hour V/C ratio and peak hour Operating LOS listed assume completion of the proposed SR-98 highway improvements.

TABLE 10
2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS

Segment/ County/ Post-Mile	Location	Improvement Description	Peak Hour Operating LOS	Concept Level of Service
3 IMP 31.1 - 32.1	Navarro Road to Ollie Avenue	Upgrade from 2C to 4C	D	D
4 IMP 32.3 - 32.9	SR-111 to Encinas Avenue	4C/6C	F/D	D
5 IMP 32.9 - 39.6	Encinas Avenue to SR-7	Upgrade from 2C to 4C/6C	E/C	D

NOTE: Recommended improvements for the portion of SR-98 from Dogwood Road to SR-7 are subject to change based on future project studies.

POST- 2020 ULTIMATE TRANSPORTATION CORRIDOR

The post-2020 Ultimate Transportation Corridor (UTC) describes the long term (beyond the 20 year planning period) right of way requirements for a particular segment. The long term needs are determined by Transportation Planning activities, which include investigation and analysis of Community Plans, General Plans, Transportation Plans, Land Use Plans, Environmental Documents, and other planning documents. The intent is to take advantage of or develop opportunities for long term right of way acquisition and to work with local and regional agencies to implement corridor preservation measures.

The UTC proposes the number of lanes and the facility type. The for SR-98 is the same as the 2020 Transportation Concept, however, additional transportation studies may warrant a change in either the 2020 Transportation Concept or the Post-2020 Ultimate Transportation Corridor.

LIST OF SYSTEM PLANNING ACRONYMNS

ADT	Average Daily Traffic
APCD	Air Pollution Control District
CAA	Clean Air Act
CMP	Congestion Management Program
CTC	California Transportation Commission
DU	Dwelling Unit
EA	Environmental Assessment
EPA	Environmental Protection Agency
F&E	Freeway and Expressway System
FHWA	Federal Highway Administration
IBTC	International Border Trade Corridor
ICES	Intermodal Corridors of Economic Significance
IRRS	Interregional Route System
ISC	Indirect Source Control
ISTEA	Intermodal Surface Transportation Efficiency Act
ITIP	Interregional Transportation Improvement Program
ITMS	Integrated Traffic Management System
LOS	Level of Service
MSL	Maintenance Service Level
MTDB	Metropolitan Transit Development Board
NAAQS	National Ambient Air Quality Standards
NAFTA	North American Free Trade Agreement
NHS	National Highway System
PHV	Peak Hour Volume
PM	Post Mile
POE	Port of Entry
RAQS	Regional Air Quality Strategy
RAS	Regional Arterial System
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
R/W	Right of Way
SANDAG	San Diego Association of Governments
SCAG	Southern California Associations of Governments
SD&IV	San Diego and Imperial Valley Railroad
SHOPP	State Highway Operation and Protection Plan
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
TASAS	Traffic Accident Surveillance and Analysis System
TCM	Transportation Control Measure
TCR	Transportation Concept Report
TDM	Transportation Demand Management
TSM	Transportation Systems Management
V/C	Demand Volume to Capacity Ratio
VMT	Vehicles Miles Traveled

LEVEL OF SERVICE (LOS) DEFINITIONS

LOS is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort and convenience, and safety. LOS definitions can generally be categorized as follows:

LOS	D/C	Congestion/Delay	Traffic Description
		(Used for conventional highways)	
"B"	<0.46	None	Free to stable flow, light to moderate volumes.
"C"	0.46-0.65	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.66-0.85	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.86-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
“F”	>1.00	Considerable	Forced or breakdown flow Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle.

State Route 98

I approve this Transportation Concept Report as the guide for development of SR-98 over the next 20 years.

Submitted By:

Carol Boland — 5/25/01

Carol Boland, Chief
System Planning Branch

Date

Recommended By:

Gene Pound — 5/30/01

Gene Pound
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Date

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Gary L. Gallegos — 5-30-01

Gary L. Gallegos
District Director

Date